

SPECIAL TOPIC SYMPOSIUM: EVALUATING MODELING AND SIMULATION PROGRAMS

Friday, 11 April 8:30am-10:00am

UNM SUB Room: Santa Ana

Session Chair: Jeremy Horne (RhinoCorps, Ltd)

8:30 Horne, Jeremy (RhinoCorps, Ltd)

MODELING AND SIMULATING THE INTERNATIONAL BATTLE SPACE – PROBLEMS AND PROSPECTS OF HYBRID SYSTEMS ACTING ON THEIR OWN

8:50 Lattimore, Peter (RhinoCorps, Ltd)

SIMAJIN: AN EXAMPLE OF WHY CURRENT VV&A CANNOT BE USED TO ASSESS COMPLEX M&S PROGRAMS

9:10 Snell, Mark K. (Sandia National Laboratories)

ADDRESSING WEAKNESSES IN CURRENT DEFENSE- AND SECURITY-RELATED MODELING AND SIMULATION

9:30 Macias, Filiberto (Unmanned and Autonomous Systems, White Sands Missile Range, NM)

PROBLEMS WITH USING VV&A TO EVALUATE UAS

Modern war-gaming centers on highly technologically based modeling and simulation (M&S) of battlefields worldwide. In a fashion similar to an increasing reliance upon computers to diagnose and treat patients (the output of machines often directing the course of treatment), M&S systems are increasingly being used to assess battlefield situations and provide suggested solutions. Here results a synthetically-based war, where the dynamics between human consciousness and a possible "artificial consciousness" in the M&S program (marked by emergent behavior) can result in global-wide conflicts assuming a life of their own and beyond the control of the persons relying upon the M&S program to help manage the conflict. The US Department of Defense has offered Verification, Validation, and Accreditation (VV&A) as the way of ensuring that M&S will do what is expected. However, formal logical analysis indicates otherwise and that the central issue rests with the nature of representation of reality. This session will be a forum for reviewing the nature of M&S and the M&S integrity-checking problem.